U. S. Department of the Interior
Bureau of Land Management

Western Oregon Districts

TRANSPORTATION MANAGEMENT PLAN

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WESTERN OREGON TRANSPORTATION MANAGEMENT PLAN

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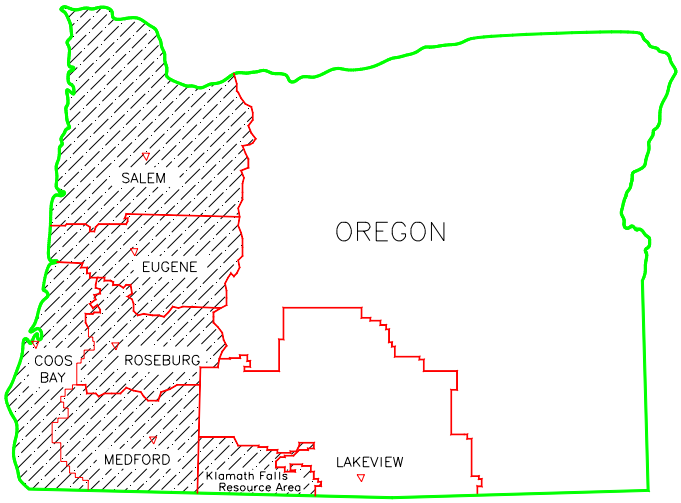
I. INTRODUCTION

The purpose of this Western Oregon Transportation Management Plan (TMP) is to provide vision, goals, objectives, and guidelines for managing the Bureau of Land Management's (BLM) road and trail transportation system throughout its Western Oregon Districts. This TMP encompasses Coos Bay, Eugene, Medford, Roseburg, Salem Districts and the Klamath Falls Resource Area of the Lakeview District. These BLM Districts contain approximately 13,360 miles of BLM controlled roads and 320 miles of trails within their boundaries.

This TMP responds to each District's Record of Decision and approved Resource Management Plan (ROD/RMP) objectives to develop and maintain a transportation plan that serves the needs of users in an environmentally sound manner. The intent of this TMP is that the transportation system be managed in a manner consistent with the most current governing regulatory and resource management documents.

The TMP will be used to guide the management of the transportation system and to coordinate with Federal, State, and local agencies. Transportation planning considers the importance and interdependency of all resources, including people, and is an important element in ecosystem management.



BLM Districts in Western Oregon

II. VISION

Develop and maintain an environmentally sound road and trail system that meets the needs of the users.

III. TRANSPORTATION MANAGEMENT GOALS AND OBJECTIVES

A. ACCESS

A system of arterial, collector, local, and resource roads allows travel to various parts of each District. Arterial, collector, and local roads form the backbone of the transportation system. These roads are primarily accessed by Federal, State, local government, and private roads.

Public use of BLM roads is allowed by permit, BLM policy, or administrative decision. BLM roads are not public roads and are best described as "government private roads" since the BLM is not a public road authority and cannot dedicate public roads. BLM roads also do not fit the criteria for public roads as established by the Secretary of Transportation. There have been many Solicitor opinions (e.g. those of October 14, 1968; May 27, 1970) and court cases (e.g. King vs. Edward Hines Lumber Company) that make it clear BLM roads are not public roads. The United States, as proprietor of the public lands, may construct roads and prescribe the type, manner, and extent of use they receive. While the BLM promotes the safety of all the users of the public lands, it should be noted that the BLM transportation system was not designed to the same safety standards as public roads.

Due to the BLM checkerboard land ownership, the Bureau has entered into numerous reciprocal right-of-way agreements which do not grant rights for the public to use roads constructed under the agreements. These agreements enable the Bureau to use private roads to access BLM lands and are an essential part of a complete transportation system. The agreements also allow private landowners use of BLM roads to access their property. Access across BLM lands is also authorized by other types of permits.

Road and trail access across BLM lands is authorized by the Federal Land Policy Management Act of 1976 (FLPMA), right-of-way grants, and reservations.

Goal – Identify arterial, collector, local, and resource roads.

Objective

- Incorporate arterial, collector, local, and resource classification into corporate transportation databases.

Goal – Provide access to and through BLM managed lands.

Objectives

- Provide access for the management of BLM lands consistent with land use allocations and resource objectives.

- Utilize easements or reciprocal right-of-way to gain legal access to BLM managed lands. Consider the need for public access when acquiring access rights.

- Review existing BLM administrative access rights to determine which ones may need to be amended (e.g. to include public rights) or terminated.

- Allow use of the BLM transportation system and managed lands by adjacent private landowners by using reciprocal right-of-way agreements, permits, FLPMA grants, or the BLM's casual use policy.

- Coordinate with potentially affected right-of-way permittees on any decisions to change road access status.

- Provide road signs and maps to assist travelers.

Goal – Provide trail access across BLM lands and to adjoining non-Bureau trail systems.

Objectives

- Seek public involvement in identifying and planning future recreational trails.

- Coordinate with affected landowners on trail system planning that may include easement acquisition.

- Identify unplanned and unauthorized trail construction and use, especially in environmentally sensitive areas, and implement appropriate action.

B. RESOURCE MANAGEMENT

Major elements of the TMP are the management and protection of basic resources such as water, soils, timber, fish, wildlife, and vegetation. The road and trail systems affect these resources as well as public use and enjoyment of them. The land in road right-of-way corridors is excluded from timber management base acres. The TMP considers the needs of resources and people. Each District's ROD/RMP and its Standards & Guidelines, along with watershed analysis recommendations, will help determine TMP objectives.

1. WATER and SOILS

Goal – Maintain or improve water quality.

Objectives

- Comply the management actions and directions described in the Aquatic Conservation Strategy as listed in each District's ROD/RMP.
- Comply the management actions required by the Clean Water Act to meet State water quality requirements to restore and maintain water quality and to protect the recognized beneficial uses in watersheds.
- Use watershed analysis and the TMOs to prioritize roads for restoration, limited access, decommissioning, full decommissioning, or obliteration. Reduce road miles in Key Watersheds if funding is sufficient.
- Utilize the TMOs to reduce road miles in Key Watersheds as identified in the ROD. If funding is insufficient to implement reductions, do not permit a net gain in road miles in Key Watersheds.
- Consult with Permittees to improve or stabilize Permittee roads.

2. FISH HABITAT

Goal – Reduce impacts fish habitat.

Objectives

- Protect resident and anadromous fish and their associated habitat by reducing sedimentation and landslide hazards associated with roads.

- Provide and maintain fish passage where roads cross existing fish-bearing streams.

3. FOREST PRODUCTS AND OTHER COMMODITIES

Goal – Provide access to current and future forest management projects.

Objectives

- The transportation system will be maintained for the management of forest products and other commodities.

- Consider the use of alternative harvesting techniques to minimize new road construction.

4. WILDLIFE

Goal – Reduce impacts wildlife habitat.

Objectives

- Consider Federally-listed threatened, endangered, special status, and other wildlife species in transportation management.

- Consider using native plants to reduce ground-disturbing activities associated with roads to meet big game management objectives.

- Consider road density targets identified in each District's ROD/RMP based on the identified needs of wildlife species.

- Manage access in Late-Successional Reserves (LSR) to reduce disturbance or loss of wildlife habitat.

5. VEGETATION (including Noxious Weeds)

Goals – Reduce impacts to special status plant species habitat and reduce the spread of noxious weeds.

Objectives

- Consider federally-listed (or proposed as threatened or endangered), state-listed, and Bureau sensitive plant species in transportation management.

- Coordinate with other road authorities to protect special status species on BLM lands and reduce the spread of noxious weeds.

- Avoid locating roads through special habitats or features such as wetlands, bogs, and meadows, when alternate routes are feasible.

- Comply with the *Supplemental Record of Decision (signed May 5, 1987) for the Northwest Area Noxious Weed Control Program Environmental Impact Statement.*

- Use native plant species in road closures, restoration, or erosion control projects that are consistent with LSR objectives and Bureau policy.

6. PORT ORFORD CEDAR (Coos Bay, Medford, and Roseburg Districts)

Goal – Reduce the spread of Port Orford Cedar root disease (*Phytophthora lateralis)*.

Objectives

- Comply with the *Port Orford Cedar Management Guidelines* (BLM, Sept. 1994).

- Use inventories of infected and uninfected areas in transportation management decisions and activities.

- Clean earth-disturbing equipment before entering uninfected areas and after operating in infected areas. Record cleaning locations for future use.

7. FIRE

Goal – Maintain suitable access for fire management.

Objectives

- Consider fire management needs on BLM lands as well as adjacent public and private lands in road access decisions.

- Coordinate with the Oregon Department of Forestry, fire districts, and adjacent landowners on changes in road access.

- Maintain roads that access fire management facilities such as pump chances, other water sources, and helipads.

C. RECREATION

The BLM transportation system provides access to a variety of dispersed and developed recreational facilities and areas, trails and trail heads, scenic landscapes, and special areas. Public demand for recreation is growing as populations increase. Therefore, as the current transportation system changes, the important role that recreation plays on the Districts must be fully considered. The transportation system should emphasize the recreation management objectives outlined in the Districts' ROD/RMP, Recreation Area Management Plans, and applicable Outdoor Recreation Strategic Plans.

Goal – Provide and maintain access that is sensitive to recreational needs and objectives.

Objectives

- Prioritize maintenance and improvements to roads that access developed recreational sites and areas.

- Maintain roads that provide opportunities for dispersed recreational activities such as auto touring, hunting, fishing, and camping. Maintenance levels for roads should reflect the designated Recreation Opportunity Spectrum (ROS) experience for that management area.

- Determine the need for legal public access for recreation when acquiring new or reviewing existing access rights.

- Consider on-site interpretation along roads as part of interpretive auto tours or trail systems.

- Consider visual resource objectives as listed in each Districts' ROD/RMP for new road locations and transportation management decisions.

Goal – Provide and maintain trails for people to experience diverse ecosystems and recreational settings.

Objectives

- Roads identified through the TMOs for closure should be considered for "Roads-to-Trails" opportunities and become part of the trail system.

- Develop and maintain trails to provide a variety of ROS classes. Trails should be designed to meet a variety of experiences including equestrians and users of motorized and non-motorized vehicles.

D. PUBLIC INVOLVEMENT

Users of the BLM transportation system include recreationists, contractors, permittees, private landowners, special interest groups, public utilities, mining claimants, local communities, and other agencies (local, State, and Federal). All users have specific interests in various levels of road access and maintenance.

While the TMP should be responsive to public concerns, it must also be consistent with policies, budgets, access agreements, BLM Manual direction, each District's ROD/RMP, and governing regulatory documents.

Goal – Involve the public during implementation of this Plan.

Objectives

- Provide the public with information about the transportation system

- Utilize the National Environmental Policy Act of 1969 (NEPA) process for transportation management decisions, including public involvement and public notification, as appropriate.

Goal – Include the transportation needs of local communities and businesses that may depend on the BLM transportation system.

Objectives

- Participate in state and local transportation planning to exchange and integrate information for BLM transportation planning.

- Coordinate with local counties and other agencies to provide input for sound rural development.

- Develop partnerships or cooperative agreements, where appropriate, to increase monitoring and maintenance efficiency in operation areas.

E. ECONOMICS

With continued population growth throughout the Northwest, the Rural Interface Areas will become an increasing challenge. People and communities who depend on BLM roads will be affected as access to many areas within the Districts' boundaries becomes limited. The reduction in funding for maintenance of the transportation systems could require the BLM to examine ways to reduce overall costs.

Goal – Provide and maintain a cost-effective transportation system.

Objectives

- Consider ways to reduce construction and maintenance costs.
- Share the improvement and maintenance costs of District transportation systems with the primary users, whenever possible, through cost-share agreements.
- Evaluate existing road use to determine if partnerships or cooperative agreements are appropriate for road maintenance. For roads with high non BLM related traffic, consider transferring ownership to the state or county.
- Keep maintenance fees current on an annual basis.
- Place a high priority on monitoring and verification of road use relating to the collection of road use and maintenance fees, as outlined in the *Western Oregon Road Fee Collection Pilot Project* (October 1992).

IV. STANDARDS

A. FUNCTIONAL ROAD CLASSIFICATIONS

Most rural highway travel involves movement through networks of roads that can be described using a functional system based on traffic volume, vehicle speed, trip distance, travel mobility, and property access. The system of functional classifications in descending order consists of **arterial (for main traffic movement), collector, local (for land access) and resource roads.** Each element of the functional system can serve as a collecting facility for the next highest element.

Arterial roads typically are characterized by high traffic volumes and vehicle speeds, long trip distances, unimpeded travel mobility, and limited property access. Conversely, the function of **local** roads is to provide property access (implementation of which causes a limitation of travel mobility). Roads in this lower functional class typically support lower traffic volumes and vehicle speeds, and shorter trip distances. This functional classification system is more fully described in the Federal Highway Administration (FHWA) publication *Highway Functional Classification: Concepts, Criteria, and Procedures* (1974). The Bureau has added **resource** roads to the system identified in this FHWA plan to better account for the unique function of many Bureau roads in providing very small-scale public land access. These **resource** roads typically carry extremely low traffic volume and accommodate only one or two types of resource management (see BLM manual 9113-l).

Functional classification, which is the grouping of roads by the character of service they provide, establishes a systematic approach to road planning, design, and maintenance. Stratifying the Bureau's road network by functional classes provides a rational and cost-effective basis for (1) the selection and application of geometric design criteria and standards (e.g., maximum. road grades, roadway width, and design speed); and (2) the assignment of appropriate road maintenance levels (i.e., from basic custodial care to annual scheduled and preventative maintenance programs).

Bureau roads are classified as follows:

1. **Arterial Roads -** The rural arterial system consists of a network of routes with the following service characteristics:

    a. Linkage of cities, larger towns, and other traffic generators (such as major resort areas) that are capable of attracting travel over long distances.

    a. Integrated interstate and intercounty service.

    b. Internal spacing consistent with population density, so that all developed areas of the State are within a reasonable distance of arterial highways.

    c. Trip lengths and travel densities greater than those predominantly served by rural collector, local, and resource systems.

    e. Design standards provide for high travel speeds and minimum interference to through movement.

As Bureau roads are predominantly low volume and are generally extensions of or connectors to State Highway and rural County Road systems, an **arterial** classification does **not** apply normally to Bureau roads (see BLM manual 9113).

2. **Collector Roads** – The rural collector system generally serves travel primarily of intracounty rather than statewide distances and constitutes those routes on which predominant travel distance and speed are less than on arterial routes. These routes serve larger towns, important agricultural areas, parks (County, State, and Federal) and other traffic generators of equivalent intracounty importance. These routes link to the arterial system and are spaced at intervals consistent with population density to accommodate traffic from local roads and bring all developed areas within reasonable distances of collector roads.

   Designation of Bureau collector roads is based on the following criteria:

   a. Roads that normally provide access to large blocks of public land and connect with State and County road systems.

   b. Roads that accommodate multiple uses and generally receive the highest volume of traffic of all roads in the Bureau road system.

   c. Roads designed to the Bureau's highest standards may be double lane.

   d. Roads designated as scenic routes or Back Country Byways (Type I, see 8357-1 Manual).

   e. Roads that provide access to recreational areas containing a number of developed sites and facilities.

   f. Roads that provide the most extensive linkage to the local road system.

3. **Local Roads** – The rural local system primarily provides access to lands adjacent to the collector network and serves travel over relatively short distances. Designation of Bureau local roads is based on the following criteria:

   a. Roads that normally serve smaller areas than collectors and connect with collectors or State and County road systems.

   b. Roads that accommodate fewer uses and receive lower traffic volumes than collectors.

c. Roads designed typically to a single lane width with steeper grades, sharper horizontal curves, and lower design speeds than collector roads due to mountainous terrain.

d. Roads that provide access to small recreational sites, trailheads, special sites and facilities (i.e., communication sites).

e. Roads that provide the most extensive linkage to the resource road system.

4. Resource Roads – The Bureau resource road system provides access to the remaining portion of the public lands not accessed by collector or local roads. Designation of Bureau resource roads is based on the following criteria:

a. Roads are normally spurs that provide point access to public lands and connect with local or collector roads.

b. Roads are typically for only one or two types of resource management and carry very low traffic volumes.

c. Location and design of these roads are governed by environmental compatibility and minimal construction and maintenance costs, and with minimal consideration for user cost, comfort, or travel time.

d. Roads have no established or designated recreational use (e.g., comfort station, trailhead, wayside) to attract the public.

B. TRANSPORTATION MANAGEMENT OBJECTIVES

The ROD/RMP requires that Transportation Management Objectives (TMO) be developed for all existing and newly constructed BLM controlled roads. Key items such as private land access, road stability, erosion potential, recreational needs, and specific resource management objectives are examined by an interdisciplinary team to identify the needs and objectives of each road segment. Specific data elements might vary depending upon each District's unique needs, but the overall strategy is the same. TMOs recommend one or several management actions for each Bureau-controlled road and identify:

1. current and future use and constraints.
2. maintenance level.
3. improvement and maintenance needs.
4. roads that may be closed

TMOs will be developed or re-examined in conjunction with watershed analysis or watershed-based Environmental Assessments. At the time of project planning, as new information becomes available, and/or after various land management activities occur within a watershed, TMOs will be reassessed to ensure that the recommended management is in compliance with ROD/RMP directives.

TMOs document the classification of each road (i.e. arterial, collector, local, or resource), its maintenance level, and the recommended action (i.e., road renovation, improvement or closure). Travel routes will be examined from an overall transportation network standpoint to ensure that interconnecting roads have continuity of maintenance levels and access. Roads that continue outside the analysis area to other BLM Districts, National Forests, public roads, or private lands will be examined for the same continuity.

New road and trail construction will be analyzed through the National Environmental Policy Act (NEPA) process as part of its associated project. New roads will also be assessed by the TMOs to ensure that they are properly incorporated into the transportation system. New trail construction and existing trail use will follow each District's Outdoor Recreation Strategic Plan or similar document.

An integral part of the TMO process is data management. TMO recommendations are included in FIMMS.

C. ANNUAL MAINTENANCE OPERATIONS PLAN

Each District will develop an annual Maintenance Operating Plan (MOP). The MOP will contain a list of roads and a map that shows those roads scheduled to be maintained in the current year. The MOP will include the maintenance level for each road and will be used by road maintenance units to prioritize maintenance work. The list will typically include:

1. Functional Classification
2. Maintenance Level
3. Findings of Condition Surveys
4. Damage from severe storm events.
5. Findings from bridge and major culvert inspections.
6. Resource management needs such as permittee/commercial haul, access for silviculture activities, and fuel treatment/fire suppression.
7. Forecasted preventative maintenance.
8. Commitments under reciprocal maintenance agreements.
9. Available funding and source.
10. Site-specific restrictions such as Port Orford Cedar timing restrictions.

The dates, work location, and work activity will be recorded to document maintenance accomplishments.

D. ROAD CONSTRUCTION, MAINTENANCE, AND CLOSURE

1. CONSTRUCTION

Roads, culverts, and bridges shall be designed and constructed in accordance with policies and standards in BLM 9100 Series Manuals, Best Management Practices (BMP) contained within the ROD/RMP and the ROD/RMP.

2. MAINTENANCE

The Bureau is responsible for maintaining roads under its control at standards set forth in BLM 9100 Series Manuals, BMP's contained in the ROD/RMP and ROD/RMP. Maintenance provides for resource protection, accommodation of users, and protection of the government's investment. Road maintenance is divided into five levels in accordance with the BLM manual 9113. The levels provide a progressive system of maintenance with even the lowest level ensuring resource protection by controlling surface erosion and sedimentation.

Many of the past methods used to determine maintenance levels have caused inflated levels which has weakened their reliability for a direct tie to maintenance funding. Western Oregon guidance has been included to assist the reader in determining an appropriate maintenance level. As each district reviews their maintenance levels, in accordance with these definitions, levels will be reduced and consistency across the Western Oregon Districts will increase.

Roads may receive more extensive maintenance during periods of short-term increased use. The benefitting activity or user will be responsible for funding the short-term road maintenance work required. Lack of funding or short-term changes in road use shall not be considerations when assigning long-term maintenance levels. Long-term or future use is determined through the TMOs, which establish the maintenance level recorded in the Facilities Inventory Maintenance Management System (FIMMS).

Annual Maintenance Operation Plans will be used to show short-term (yearly) maintenance needs. The MOP will be used by road maintenance units to prioritize their work. Road maintenance workload accomplishments should be tied directly to the MOP.

Roads not owned or controlled by the BLM, which were constructed on BLM lands under right-of-way grants or permits, will be maintained in accordance with the terms of the grant or permit.

Signs will be installed to assist travelers. Signs shall meet Bureau Manual 9130 and *Manual on Uniform Traffic Control Devices* standards. Vandalism and low funding continues to negatively affect the sign program.

BLM ROAD MAINTENANCE LEVELS - The five road maintenance levels are:

Level 1 – This level is assigned to roads where minimum maintenance is required to protect adjacent lands and resource values. These roads are no longer needed and are closed to traffic. The objective is to remove these roads from the transportation system.

Minimum Standards for Level 1 – Emphasis is given to maintaining drainage and runoff patterns as needed to protect adjacent lands. Grading, brushing, or slide removal is not performed unless roadbed drainage is being adversely affected, causing erosion. Closure and traffic restrictive devices are maintained.

Western Oregon Guidance – The objective of this maintenance level should also include road segments which are closed to vehicles on a long-term basis, but that may be used again in the future. This will facilitate assigning decommissioned roads at this level.

Level 2 – This level is assigned to roads where the management objectives require the road to be opened for limited administrative traffic. Typically, these roads are passable by high clearance vehicles.

Minimum Standards for Level 2 – Drainage structures are to be inspected within a 3-year period and maintained as needed. Grading is conducted as necessary to correct drainage problems. Brushing is conducted as needed to allow administrative access. Slides may be left in place provided they do not adversely affect drainage.

Western Oregon Guidance – Traffic is generally administrative with some minor specialized use, or moderate seasonal use. These are typically low standard,

low volume, single lane, natural and aggregate surfaced, and are functionally classified as a resource road.

Level 3 – This level is assigned to roads where management objectives require the road to be open seasonally or year-round for commercial, recreational, or administrative access. Typically, these roads are natural or aggregate surfaced, but may include low use bituminous surfaced road. These roads have a defined cross section with drainage structures (e.g., rolling dips, culverts, or ditches). These roads may be negotiated by passenger cars traveling at prudent speeds. User comfort and convenience are not considered a high priority.

Minimum Standards for Level 3 – Drainage structures are to be inspected at least annually and maintained as needed. Grading is conducted to provide a reasonable level of riding comfort at prudent speeds for the road conditions. Brushing is conducted as needed to improve sight distance. Slides adversely affecting drainage would receive high priority for removal, otherwise they will be removed on a scheduled basis.

Western Oregon Guidance - These road segments serve as a an artery to other road networks and are functionally classified as a local road.

Level 4 – This level is assigned to roads where management objectives require the road to be open all year (except may be closed or have limited access due to snow conditions) and which connect major administrative features (recreational sites, local road systems, administrative sites, etc.) to County, State, or Federal roads. Typically these roads are single or double lane, aggregate, or bituminous surface, with a higher volume of commercial and recreational traffic than administrative traffic.

Minimum Standards for Level 4 – The entire roadway is maintained at least annually, although a preventative maintenance program may be established. Problems are repaired as discovered.

Western Oregon Guidance - These roads serve as arteries that intersect County, State and Federal roads and connect with major recreation and administrative facilities. These roads are functionally classified as collector roads.

Level 5 – This level is assigned to roads where management objectives require the road to be open all year and are the highest traffic volume roads of the transportation system.

Minimum Standards for Level 5 – The entire roadway is maintained at least annually and a preventative maintenance program is established. Problems are repaired as discovered. These roads may be closed or have limited access due to snow conditions.

Western Oregon Guidance – Road segments assigned this maintenance level are **double lane**, paved roads that are open year-round. These roads intersect County, State and Federal roads and are functionally classified as a collector or arterial road.

3. ROAD CLOSURE

The Northwest Forest Plan and each District's ROD/RMP emphasize a reduction in the miles of road within some watersheds. The objectives of road closure are to reduce sedimentation, restore hydrological processes, reduce total road maintenance cost, and reduce impacts to fish or wildlife habitat, botanical resources, or special areas.

Roads controlled by BLM will be managed in varying states of accessibility. The District will coordinate with potentially affected right-of-way permittees on decisions that change road access status.

The four categories of road closures are appropriate measures to meet the Management Direction of the ROD/RMP to reduce the adverse impacts from roads. The appropriate category of road closure will be determined through the TMOs based upon site specific assessments.

Only the full decommission and obliteration categories are appropriate to meet the Management Direction of a reduction or no net increase in the amount of roads within Key Watersheds. Full decommissioned and obliterated road information will be removed from FIMMS and will reside on the ground transportation (GTRN) theme for historical purposes. The inventory designation will be "Non-Inventoried Other" (NIO).

Temporary/Seasonal/Limited Access – These are generally resource roads, closed with a gate or barrier. The road will be closed to the public but may be open for BLM/Permittee commercial activities. The road may or may not be closed to BLM administrative uses on a seasonal basis depending upon

impacts to the resources. Drainage structures will be left in place.

Decommission (long-term > 5 years) – These will be based on resource protection needs identified in watershed analysis and the RMP directives. The road segment will be closed to vehicles on a long-term basis, but may be used again in the future. Prior to closure the road will be left in an "erosion-resistant" condition by establishing cross drains, eliminating diversion potential at stream channels, and stabilizing or removing fills on unstable areas. Exposed soils will be treated to reduce sedimentation. The road will be closed with an earthen barrier or its equivalent.

Full Decommission (permanent) – Roads determined through an interdisciplinary process to have no future need may be subsoiled (or tilled), seeded, mulched, and planted to reestablish vegetation. Cross drains, fills in stream channels, and unstable areas will be removed, if necessary, to restore natural hydrologic flow. The road will be closed with an earthen barrier or its equivalent. The road will not require future maintenance. This category includes roads that have been closed due to a natural process and where hydrologic flow has been naturally restored.

Obliteration (full site restoration/permanent) – Roads receiving this level of treatment have no future need. All drainage structures will be removed. Fill material used in the original road construction will be excavated and placed on the subgrade in an attempt to reestablish the original ground line. Exposed soil will be vegetated with native trees or other native vegetation. Obliteration is the most expensive road reclamation process.

E. TRAIL CONSTRUCTION, MAINTENANCE, AND CLOSURE

BLM provides trails for a broad spectrum of uses on the public lands including hiking, horseback riding, cross-country skiing, motor biking, bicycling, All Terrain Vehicles, snowmobiling, and administrative purposes. Trails crossing BLM lands must be located, designed, constructed, and maintained to preserve natural, historic, cultural, and scenic values. Unauthorized trails should be identified and appropriate measures taken.

1. **CONSTRUCTION** – Trails will be designed and constructed in accordance with the policies and standards set forth in BLM Manual 9114 and the ROD/RMP.

2. **MAINTENANCE** – The BLM is responsible for maintaining trails under its control in accordance with the policies and standards set forth in BLM Manual 9114. Maintenance provides for resource protection and the reasonable safety of users.

   Trail maintenance is divided into 5 levels in accordance with FIMMS. Each trail within the transportation system is assigned a level of maintenance designed to meet management objectives. The levels provide a progressive system of maintenance with even the lowest level ensuring resource protection by controlling surface erosion and sedimentation.

   BLM TRAIL MAINTENANCE LEVELS - The assigned maintenance level reflects the appropriate level of maintenance required to meet management objectives.

   Level 1 – These trails are closed to motorized and non-motorized use. This level is the minimum maintenance required to protect adjacent lands and resource values. The objective is to remove these trails from the trail system.

      Minimum Standards for Level 1 – Emphasis is given to maintaining drainage and runoff patterns as needed to protect adjacent lands. Brushing and removal of hazards is not performed unless trail drainage is being adversely affected, causing erosion. Closure devices are maintained.

   Level 2 – Low-use trail with little or no contact between parties. Little or no monitoring or management of visitor use. Visitors may encounter obstructions like brush and dead fall.

      Minimum Standards for Level 2 – Trail would require condition surveys once every year. Repairs will be done at the beginning of the use season to prevent environmental damage and maintain access. Emphasis is given to maintaining drainage and mitigating hazards. The trail may be signed "Not Regularly Maintained". Major repair may not be done for several seasons.

   Level 3 – Moderate use trail with visitor use on a seasonal and/or peak use period with frequent contact between parties. Trail management is conducted with occasional monitoring or management of visitor use. Visitors are not likely to encounter obstructions.

Minimum Standards for Level 3 – The trail requires a minimum of one condition survey 1 to 2 times per season. Major repairs shall be completed annually. Maintenance shall be scheduled two or three times per season, if required, to repair the trail for environmental damage and to maintain access. Trail is kept in fair to good condition.

Level 4 – High use trail used during specific times of the year with high frequencies of contact between parties. Regularly scheduled monitoring or management of visitor use.

Minimum Standards for Level 4 – Scheduled maintenance shall occur frequently during the use season (three or four times per season). Trail condition and accessibility for persons with disabilities is a major concern. Significant repairs shall be completed within 10 working days. Trail is kept in good to very good condition.

Level 5 – A special high use trail with routine monitoring or management of visitor use.

Minimum Standards for Level 5 – Has a scheduled maintenance program. Trail condition and accessibility for persons with disabilities is a major concern. Trail is kept in excellent condition.

3. **TRAIL CLOSURE/LIMITATIONS** – Trails may be closed or use restricted to fulfill management objectives such as protecting public health and safety or preserving resources.

Restrictions – Limitations that may be placed on the use of trails include:

1. No bicycles
2. No horses
3. No motorized vehicles
4. Permit required for use
5. Seasonal closure

F. MONITORING

Monitoring is the process of collecting information to evaluate if objectives and anticipated or assumed results of a management plan are being realized or if implementation is proceeding as planned. The objective of monitoring

the TMP is to determine whether the management practices have been implemented and evaluate the effectiveness.

1. **TRANSPORTATION MANAGEMENT OBJECTIVES** – TMOs are dynamic. Periodic reviews of the information and recommendations are necessary. The applicability and appropriateness of TMOs for specific watersheds or projects will be evaluated during updated watershed analysis or when developing project-level plans. Changes in TMOs may occur to ensure that the recommended transportation management objective is in compliance with overall resource management direction.

2. **CONSTRUCTION** – Monitoring of construction will be performed by BLM Project Inspectors to ensure compliance with contractual stipulations. If a situation arises that could result in an adverse environmental impact, the issue will be brought to the attention of the Contracting Officer's Representative, Contracting Officer, and the appropriate resource specialist for resolution.

3. **MAINTENANCE** – Special inspections and maintenance will be conducted after large storm events to correct any problems that might occur; if safety permits, corrective maintenance may occur during storm events.

   Roads – Road maintenance will be monitored by the District Road Maintenance crews and appropriate Resource Area specialists (e.g., engineers, hydrologists, soils scientists). Routine maintenance and inspections are conducted on the schedule prescribed by the assigned maintenance level. Agency personnel using the transportation system are responsible for reporting maintenance needs.

   Bridges and Major Culverts- shall be inspected in accordance with BLM Manual 9112.

   Trails – Monitoring trail use will help determine the appropriate BLM trail maintenance level. Condition surveys will be conducted according to the assigned maintenance level to determine the maintenance needs.

4. **CONDITION ASSESSMENTS -** Condition assessments determine the overall condition of the transportation facilities, and help in evaluating the performance of the maintenance program. Condition assessments are a critical step in monitoring and managing the road and trail systems. They are essential in maintaining an accurate

inventory, and prioritizing annual and deferred maintenance and capital improvement activities.

An in-depth assessment should be conducted every 5 years on every road or trail. Bridges must be inspected at regular intervals not to exceed 2 years. Major culverts must be inspected and evaluated at regular intervals not to exceed 10 years. Inspect and evaluate, once a year, all structures not capable of carrying the legal load limit.

In accordance with the executive mandate, identified in the Federal Accounting Standards Advisiory Board's direction, each office must maintain a backlog of deferred maintenance that is supported by condition assessments. These assessments are also required to justify all road and trail projects submitted and approved on BLM's Deferred Maintenance and Capital Improvement Five Year Plan.

In accordance with the BLM Strategic Plan, by FY 2005, condition assessments will have been conducted on 100% of BLM maintained roads.

5. **CLOSURE** – Roads that are closed and remain part of the road inventory will continue to be monitored as existing roads in accordance with their maintenance level.

   Roads that are removed from the roads inventory will revert back to the appropriate land base. Monitoring will be conducted to ensure that the decommissioning practices have been effective. Monitoring should be conducted by the appropriate disciplines.

G. INVENTORY

The road and trail inventory is a critical component in the implementation of the TMP. It is used to manage information such as current status, maintenance costs, condition, use, maintenance accomplishments, evaluating and monitoring results, and determining and setting maintenance priorities.

Inventory information resides in two databases, digital spatial lines and informational.

The digital spatial lines data (geometry of the line) for both roads and trails are storied in the ground transportation spatial (GTRN) database, and the informational data that describes and characterizes each line in the GTRN database is storied in the Facility Inventory Maintenance Management System (FIMMS). MAXIMO is the asset management software the Bureau is evaluating as a replacement to FIMMS. GTRN linked to FIMMS through the geographic

information system (GIS) make up the OR/WA Ground Transportation Theme inventory system in use in Western Oregon (and statewide).

In addition to GTRN and FIMMS, inventory information is stored as records and files at all levels of the organization.

INFORMATIONAL DATABASE
FIMMS is the Bureau's corporate facility asset management software where all informational data resides for BLM owned and controlled facilities and transportation systems. FIMMS includes roads, trails, bridges, culverts (major and minor), and any other appurtenances, structures, and facilities that are part of the BLM transportation system. Data stored and tracked in FIMMS includes information such as physical characteristics of the feature, condition, public access rights, TMO information, jurisdiction, location, ownership and the annual/deferred maintenance costs of the facility and its appurtenances.

SPATIAL DATABASE
GTRN data base is the repository of all transportation digital spatial lines data for Oregon and Washington.

OR/WA GROUND TRANSPORTATION THEME
Ground transportation theme is an OR/WA BLM GIS corporate layer that ties to other OR/WA BLM corporate GIS themes (Hydro/Fish, PLS, LIS, etc.) to provide a comprehensive operational and interactive inventory to manage the transportation program.

The roads and trails in the ground transportation theme are divided into three categories; BLM Inventoried, Non-Inventoried Significant (NIS), and Non-Inventoried Other (NIO) as defined below.

- BLM inventoried. Roads and trails that make up the district's transportation system. These roads and trails are required to be inventoried and must be included in FIMMS. This category may include roads and trails other than BLM controlled or owned. The roads and trails that are chosen to be inventoried and included in FIMMS, other than BLM controlled or owned, are done so due to their importance for BLM operations, and to complete the network of roads and trails making up the district's transportation plan (use patterns /access patterns) to carry out the mission.

- Non-Inventoried Significant. Non-BLM controlled or owned roads and trails that are outside the district's network of roads and trails making up their transportation plan. These are not included in FIMMS, but in the Info Table stored in Arc/Info. In this category BLM collects minimal inventory information to fill in the gaps from BLM transportation (road & trail) network to towns and other destinations or routes. The Non-Inventoried Significant category is composed of roads such as Interstate Highways, US Highways, State Highways, County Roads and Forest Level Highways and trails such as the Pacific Crest Trail.

- Non-Inventoried Other. Any linear disturbance (such as jeep trails, utility line access roads, short spur roads to logging landings, permanently closed roads, etc.) on the landscape where the district wants to identify spatially and track. The data is not located in FIMMS, but in the Info Table stored in Arc/Info.

RECORDS AND FILES

The districts and state office have numerous records and files containing specific information about the transportation system. Some of these are road records, and bridge and major culvert, trail, and rights of ways files.

V. IMPLEMENTATION

Each District will individually develop a District Implementation Strategy. The Strategy in conjunction with the Western Oregon TMP forms the individualized Road Management Plan as required by each District's RMP. The Strategy shall reflect the unique conditions in the District.

The Strategy shall convey how TMOs, annual MOPs, monitoring, and corporate transportation inventory updates will be accomplished in a timely manner. A sample District Implementation Strategy is in Appendix A.

The Strategy shall document the processes, products, and responsible positions for the following:

1. TMOs
2. Maintenance
   Annual MOPs
   Signs
3. Monitoring
   Road Closures
   Storm Patrols
   Condition Surveys/Deferred Maintenance
4. Corporate Transportation Inventory
   Tabular Databases (currently FIMMS and RMIS)
   Spatial Databases (currently GTRN/GTRPTS in GIS)
   Noxious Weeds/Diseases

A. BUDGET AND PERFORMANCE

Annual accomplishments for roads and trails shall be reported as workload measures. These workload measures are part of the MOP and AWP. This is in

line with the concept of performance-based budgeting (Government Performance and Results Act of 1993, GPRA).

BLM receives it's maintenance budget as annual and deferred.

Annual Maintenance - regularly scheduled repairs and preventive maintenance, performed on a cyclic basis according to assigned maintenance level. Annual maintenance funding and accomplishments relate in the following manner:

- Each District will develop an annual MOP based on district's road maintenance needs..
- Allocation of annual maintenance base funding will be allocated using FIMMS
- Using district workload priorities along with the district MOP, transportation maintenance work should be prioritized and workload accomplishment targets identified for the fiscal year.
- Work activities should be reported to the proper program elements to insure accurate tracking of workload measures.

Deferred Maintenance - maintenance that was not performed when scheduled and therefore is put off or delayed. In accordance with Standard Federal Financial Accounting Standard #6 (SFFAS), BLM is required to disclose the amount of deferred maintenance on roads and other facilities. To comply with SFFAS, deferred maintenance on roads must be identified and submitted according to the following procedure.

- Identify deferred maintenance needs through conditions assessments.

- Prioritize project needs based on the following criteria: critical heath and safety, critical natural and cultural resource protection, and critical mission related needs.

- District prioritized lists will be part of the BLM Deferred Maintenance Five Year Plan.

Capital improvement funding is requested as a special appropriation or through the BLM Capital Improvement Five Year Plan process.

Capital Improvement -The construction, installation, or assembly of a new facility, or the alteration, expansion, or extension of an existing facility to accommodate a change of function or unmet programmatic needs.

- Projects must be recommended in a TMO

- Projects must comply with district's RMP.

- Need proper BLM planning documentation as identified in BLM manual 9110.

Funding for transportation projects is also available from other sources such as Jobs in the Woods, proceeds from timber sales, etc.

VI. AUTHORITY AND POLICY

A. AUTHORITY

A number of Federal laws and internal regulations give BLM the authority to develop and manage an integrated road and trail system:

The following Laws and Executive Orders address transportation planning, operation, and maintenance:

- FLPMA - Federal Land Policy and Management Act of 1976, Public Law 94-579, Sections 202 and 502. Provides for resource management rehabilitation, protection, improvement, planning, and administration on the basis of sustained yield. It provides for the management of transportation systems on public lands in a manner that will protect the ecological, air, water, scientific, scenic, historical, and archaeological values, and Areas of Critical Environmental Concern (ACEC). It requires the preparation and maintenance of the inventory of public land resources, including the transportation system, on a continuing basis. It also provides for receiving fair market value for the use of the transportation system.

- Executive Order 12088, October 13, 1978, Federal Compliance with Pollution Control Standards. Requires that BLM ensure that all necessary actions are taken for prevention, control, and abatement of environmental pollution with respect to transportation facilities and activities.

- Executive Order 11989, May 24, 1977, Off-Road Vehicles on Public Lands. Requires that BLM provides procedures that will ensure that the use of Off Highway Vehicles on public lands will be controlled and directed to protect the resources of those lands, to promote the safety of all users, and to minimize conflicts among the various users of those lands.

- Executive Order 11514, March 5, 1970, Protection and Enhancement of Environmental Quality, as amended by Executive Order 11991, (Secs. 2(g) and 3(h), May 24, 1977). Requires BLM to provide leadership in protecting and enhancing the quality of the Nation's environment to sustain and enrich human life. Requires BLM transportation policies, plans, and programs to meet national environmental goals.

- Standard Federal Financial Accounting Standard # 6 (SFFAS), Accounting for Property, Plant and Equipment. The accounting standard # 6 was published by the Office of Management and Budget (OMB), and the Comptroller General's Office of the United States in 1998. SFFAS #6 requires federal agencies to disclose the amount of deferred maintenance they have and report the information in each year's audited financial statement. This standard also requires federal agencies to perform condition assessments to identify and verify their deferred maintenance backlog. Accounting standards are developed by the Federal Accounting Standards Advisory Board (FASAB) to address financial and budgetary information needs of the Congress, executive branch agencies, and other users of federal financial information.

- Government Performance and Results Act of 1993 (GPRA) is a law which seeks to make the federal government more accountable for the tax dollars it spends and the results it achieves. It requires that government agencies develop and implement performance management systems to focus on results, and promote service quality, and public satisfaction. GPRA has three main components that BLM must comply with, strategic plans, annual performance plans, and annual performance reports.

- Oregon and California Grant Lands Act of 1937 (O&C Act). Provides for management of the reconveyed CBWR and revested O&C Railroad grant lands for permanent forest production under the principle of sustained yield; for cooperative

agreements with other agencies or private owners for coordinated administration; for performing any and all acts; for making such rules and regulations as may be necessary and proper for administering such lands; and for distribution of receipts.

- National Environment Policy Act (NEPA) of 1969. Requires the preparation of Environmental Impact Statements for any transportation project that may have significant affect on the environment. It requires systematic and interdisciplinary planning in making decisions about major BLM actions or proposals from the public that may have significant influence on the environment.

- Clean Water Act as amended in 1987 and Clean Air Act of 1990 as amended. Requires BLM to protect air and water quality, maintain Federal and State designated water and air quality standards, and abide by the requirements of the State Implementation Plans.

- Section 124 of the Omnibus Consolidated Appropriations Act of 1997, PL 104-208. Provides the framework by which the Bureau of Land Management may enter into watershed restoration and enhancement agreements in fiscal year 1997 and each fiscal year thereafter that to restore and maintain fish, wildlife, and other biotic resources on public or private land or both to benefit these resources on public land within the watershed.

The U.S. Code of Federal Regulations (CFR) contains traffic and engineering regulations that BLM must follow in the management and operation of Bureau roads. Through the CFR, the District Managers have the authority to implement traffic rules and issue Federal Orders that close or restrict road and trail use.

- 43 CFR 2800 Rights-of-Way, Principles and Procedures
- 43 CFR 2810 Tram Roads and Logging Roads
- 43 CFR 3809 Surface Management
- 43 CFR 8340 Off-Road Vehicles
- 43 CFR 8350 Management Areas

- 43 CFR 8360 Visitor Services
- 43 CFR 9268 Recreation Programs

B. POLICY

The TMP is based on the following policies and responsibilities taken from various BLM Manuals and documents:

- BLM Handbook H-2812-1 - *Logging Road Rights-of-Way*
- BLM Manual 9110 - *Transportation Facilities*, BLM Handbook H-9110-1 - *Transportation Planning*, and BLM Handbook H-9110-2 - *Land Management Highways*.
- BLM Manual 9112 - *Bridges and Major Culverts*
- BLM Manual 9113 - *Roads*
- BLM Manual 9114 - *Trails and BLM Handbook 9114-1*
- BLM Manual 8357 - *ByWays and Handbook 8357-1*
- BLM Manual 8342 - *Designation of Areas and Trails (Off-Road Vehicles)*
- BLM Strategic Plan was a requirement of GPRA. GPRA required that each federal agency submit a comprehensive strategic plan to Congress. BLM's plan was submitted to Congress September 2000. The plan covers a period of five years and will be revised at least every three years. BLM's plan includes a set of measurable long-term goals for the organization and provides a roadmap to meet its goals and fulfill it's mission. The plan identifies a number of long-term goals for the transportation program.
- Attachment G, titled Department of the Interior (DOI) Facilities Maintenance and Capital Improvements, is included each FY as part of the DOI's Budget Request Formulation. The document establishes the programmatic guidance

and timetable for deferred maintenance and capital improvement program Five-Year Plan submissions.

- Five-Year Plan submissions. The Department of Interior (DOI) has committed to Congress and the Office of Management and Budget that a comprehensive five-year deferred maintenance and capital improvement plan would be updated and funded each year to address DOI's deferred maintenance backlog.

- *Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Ow*l, April 1994 (Northwest Forest Plan)

- *Standards and Guidelines for Management of Habitat for Late-Successional nd Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl,* April 1994

- *Final Supplemental Environmental Impact Statement on Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl*, February 1994

- *Decision Record for the Interim Strategies for Managing Anadromous Fish-Producing Watersheds in Eastern Oregon and Washington, Idaho, and Portions of California*

- Districts' Fish & Wildlife 2000 Plan, A Strategy for the Management of Biological Resources

- Approved District (includes Klamath Falls Resource Area) Resource Management Plans/Record of Decision identify how the transportation system will be managed and operated.

- District Manuals and Handbooks addressing transportation planning, operation, and maintenance for each District.

- Western Oregon Road Fee Collection Pilot Project (October, 1992), I.M. OR-93-49 (December 17, 1992). Implemented procedures to improve tracking, monitoring, and verification of hauling of forest products over BLM roads, fee collection accountability, and collection of road use and maintenance fees.

- Oregon Road/Stream Crossing Restoration Guide (Oregon Department of Fish and Wildlife, dated 1999). Guidance that Oregon BLM Districts use to design fish passage structures and obtain permits from Oregon Department of State Lands.

- National Management Strategy for Motorized Off-Highway Vehicle use on public lands, dated January 2001.

VII. GLOSSARY

Access Agreements – (a) Generally construed to mean a Reciprocal Right-of-Way agreement. It is an exchange of grants between the United States and a Permittee, which provides for each party using the other's roads or constructing roads over the other's lands; (b) the rights granted to the United States through the purchase of a Right-of-Way easement.

Back Country Byway – A road segment designated as part of the National Scenic Byway System. (These roads may or may not be a BLM controlled road).

Best Management Practices (BMP) – Methods, measures, or practices designed to prevent or reduce water pollution. Not limited to structural and nonstructural controls, and procedures for operations and maintenance. Usually, BMPs are applied as a system of practices rather than a single practice.

Casual Use – As stated in 43 CFR 2800: Activities involving practices that do not ordinarily cause any appreciable disturbance or damage to the public lands, resources, or improvements.

Coos Bay Wagon Road Lands – Public lands granted to the Southern Oregon Company and subsequently revested to the United States, which are managed by the BLM under the authority of the O&C Lands Act of 1937.

Developed Recreation – Recreation that requires facilities, resulting in concentrated use of an area. An example of a developed recreational site is a campground. Facilities might include roads, parking lots, picnic tables, restrooms, drinking water, and buildings.

District – A geographic administrative unit within the Bureau of Land Management.

Dispersed Recreation – A term referring to recreational use outside developed recreational sites. This includes activities such as scenic driving, hiking, bicycling, backpacking, hunting, fishing, snowmobiling, horseback riding, cross-country skiing, and recreation in primitive environments.

Easement – the rights granted to the United States through the purchase of a Right-of-Way.

Exclusive easement – An exclusive easement grants control of the rights-of-way to the United States and may allow it to authorize third-party use (i.e., public) and set rules of use.

Nonexclusive easement – A nonexclusive easement to the United States only allows use by it and its agents and those authorized to do business on United States lands. The underlying landowner still controls the land use, subject to the rights granted to the United States.

Geographic Information System (GIS) – An organized collection of computer hardware, software, and geographic data designed to efficiently capture, store, update, manipulate, analyze, and display all forms of geographically referenced information. Certain complex spatial operations are possible with GIS that would be very time-consuming or impractical otherwise.

Interdisciplinary Team (ID Team) – A group of individuals with varying areas of specialty assembled to solve a problem or perform a task. The team is assembled out of recognition that no one scientific discipline is sufficiently broad enough to adequately analyze the problem and propose action.

Late-Successional Reserve (LSR) – A forest in its mature and/or old growth stages that has been reserved.

Manual on Uniform Traffic Control Devices – Standards for signing of streets and highways as approved by the Federal Highway Administration as the National Standard in accordance with Title 23, U.S. Code. These standards usually apply to roads subject to the Highway Safety Act, Maintenance levels 3-5.

Off-Highway Vehicle – Any motorized track or wheeled vehicle designed for cross-country travel over natural terrain (e.g., motorcycles, All-Terrain Vehicles, 4-wheel drive vehicles, and snowmobiles). **The term "Off-Highway Vehicle" will be used in place of the term "Off-Road Vehicle" to comply with the purposes of Executive Orders 11644 and 11989. The definition for both terms is the same**.

Oregon and California (O&C) Lands – Public lands granted to the Oregon and California Railroad Company and subsequently revested to the United States, which are managed by the BLM under the authority of the O&C Lands Act of 1937.

Partnership – In the context of these guidelines, partnerships are those alliances between individuals, groups, and/or the District that enable road and trail maintenance or monitoring activities beyond those required for resource management access.

Permittee – (a) The cooperating party to a reciprocal agreement (some early agreements refer to such a party as "Applicant"); (b) A third party using a road controlled by the United States and constructed over lands belonging to the Permittee in a reciprocal agreement; and (c) A party authorized to use roads

controlled by the United States under the terms of a Unilateral O&C Right-of-Way, mining, or grazing permit, etc.

Program Elements – Two digit output code used to track the workload measures

Public Domain Lands – Original holdings of the United States never granted or conveyed to other jurisdictions, or reacquired by exchange for other public domain lands.

Public Involvement – A process designed to broaden the information base upon which agency decisions are made by (1) informing the public about District activities, plans, and decisions, and (2) encouraging public understanding about and participation in the planning processes leading to final decision-making.

Recreation Opportunity Spectrum (ROS) – Land delineations that identify a variety of recreational experience opportunities. They are categorized into six classes: Primitive, Semiprimitive Nonmotorized, Semiprimitive Motorized, Roaded Natural, Rural, and Urban.

Resource Management Plan (RMP) – A land use plan prepared by BLM Districts or Resource Areas under current regulations in accordance with the Federal Land Policy and Management Act.

Road Density – The number of miles of roads within a given area, usually expressed in miles of road per square mile of land.

Roadbed – The graded portion of the road within the top and side slopes, prepared as a foundation for the surface structure and shoulders.
Watershed – The drainage basin contributing water, organic matter, dissolved nutrients, and sediments to a stream or lake.

Watershed Analysis – A procedure used to characterize human, aquatic, riparian, and terrestrial features, conditions, processes, and interactions within a watershed. Watershed analysis is not a decision-making process. The results of watershed analysis establish the context for subsequent decision-making.

Workload Measures – Identifies units of accomplishments to measure the work that is completed. For the transportation program this includes workload measures for road and trail construction and maintenance, bridge inspections and maintenance, and fish passage culvert work.

VIII. ACRONYMS

BLM	Bureau of Land Management
BMP	Best Management Practice
CFR	Code of Federal Regulation
FIMMS	Facility Inventory Maintenance Management System
FHWA	Federal Highway Administration
FLPMA	Federal Land Policy and Management Act of 1976
FSAB	Federal Financial Accounting Standards
GIS	Geographic Information System
GPRA	Government Performance and Results Act
GTRN	Ground Transportation (theme)
GTRPTS	Ground TRANSPORTATION points (theme)
LSR	Late-Successional Reserve
MOP	Maintenance Operation Plan
NEPA	National Environmental Policy Act of 1969
NIO	Non Inventoried Other
O&C	Oregon and California
RMIS	Recreation Management Information System
RMP	Resource Management Plan
ROD	Record of Decision
ROS	Recreation Opportunity Spectrum
TMO	Transportation Management Objective
TMP	Transportation Management Plan

IX. REFERENCES

Western Oregon Districts' Approved *Record of Decision/Resource Management Plan* and
supporting Environmental Impact Statement - 1994.

Forest Ecosystem Management: An Ecological, Economic, and Social Assessment -
Report of the Forest Ecosystem Management Assessment Team, (FEMAT) July 1993.

Final Supplemental Environmental Impact Statement on Management of Habitat for
Late-Successional and Old-Growth District Related Species Within the Range of the Northern Spotted Owl, February 1994.

Record of Decision for Amendments to Forest Service and Bureau of Land Management
Planning Documents Within the Range of the Northern Spotted Owl. Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl, April 1994.

Handbook for Forest and Ranch Roads, A Guide for planning, designing, constructing,
reconstructing, maintaining, and closing wildland roads, (Pacific Watershed Associates) 1994.

Access & Travel Management Guide - Siuslaw National Forest, (USDA) September 1994.

Supplemental Record of Decision (signed May 5, 1987) for the Northwest Area Noxious
Weed Control Program Environmental Impact Statement.

Port Orford Cedar Management Guidelines (BLM, Sept. 1994).

Highway Functional Classification: Concepts, Criteria and Procedures (1974).

Each District's "Outdoor Recreation Strategic Plan"

Interim Ground Transportation GTRN Theme Update Manual, Fall 1998

APPENDIX A
Sample District Implementation Strategy

Implementation Strategy
for the
Western Oregon
Transportation Management Plan

Coos Bay District
July 1998

PURPOSE AND OBJECTIVE

Both the Northwest Forest Plan (NFP) and each Western Oregon District's Resource Management Plan (RMP) direct each District to develop a Road Management Plan. In response, the Western Oregon Transportation Management Plan (TMP), encompassing all the Western Oregon Districts, was completed in June 1996 to fulfill the criteria set forth in these documents.

The objectives of this strategy for implementing the Western Oregon TMP on the Coos Bay District are to: 1) detail how the TMP will be implemented on the Coos Bay District; 2) meet Aquatic Conservation Strategy objectives in conducting road related activities; 3) explain the implementation strategy to the District's employees and external interested parties; and 4) ensure that roads are maintained efficiently and effectively.

The strategy itself, as well as the TMP, does not make specific transportation management decisions, but supplies guidance on how to implement decisions made by Coos Bay's Resource Management Plan and the Northwest Forest Plan. Decisions made in the aforementioned documents are consolidated and given a coordinated approach through this strategy, but are not revised, amended, or otherwise changed.

OVERVIEW OF WESTERN OREGON TRANSPORTATION MANAGEMENT PLAN

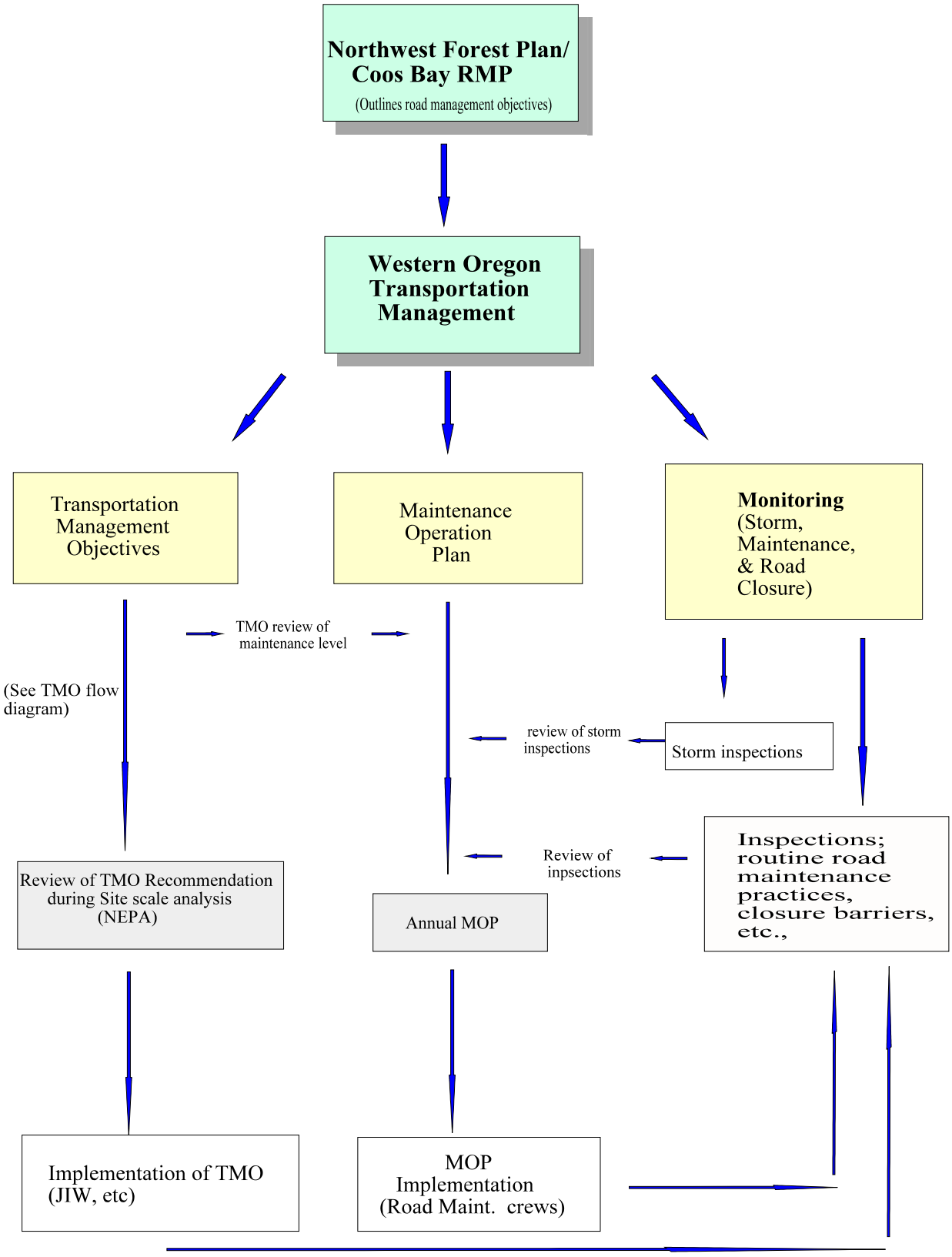
The NFP (pg. C-33, Standard & Guideline RF-7) and the Coos Bay RMP (pg. 14) offer general guidance on road management and items to consider in the development of a transportation plan. These generalities were incorporated into the Western Oregon TMP to provide consistency throughout the Western Oregon Districts and to present common road management philosophy to other Federal, State, or interested entities.

The TMP establishes goals and objectives for transportation management with respect to various resource values; common definitions for maintenance levels and road closures; and key components for its implementation. Implementation of the TMP is comprised of three *main* components: transportation management objectives, an annual road maintenance operation plan, and monitoring of road related activities. The process of how each component relates to each other and the TMP can best be illustrated by Figure 1. The plan was <u>not</u> intended to be specific on a road by road basis. This level of detail was intended to be developed by each District and would consider specifics unique to that District.

Road management in Western Oregon is complicated by BLM's checkerboard land ownership pattern and legal access agreements. Aside from the Bureau acquiring access easements across adjacent lands, the Bureau has also entered into numerous reciprocal Right-of-Way Agreements. These agreements enable the

Bureau to use private roads and ownership to access BLM lands. The reverse is also permitted. This has resulted in BLM roads being constructed on private lands and private roads being constructed on BLM managed lands. Consequently, the transportation system utilized to manage forested lands is formed by a combination of private and BLM roads. The right of adjacent land owners to access their lands, under Oregon law, is often a prime consideration in transportation management.

Figure 1. Flow Chart Describing Implementation of the Western Oregon Transportation Plan



CURRENT SITUATION

Both resource areas are currently developing transportation management objectives (TMOs) as part of the watershed analysis process. TMO recommendations and backup information are being recorded in a dBASE file with a report included in each watershed analysis document.

The District re-instituted the annual maintenance operation plan (MOP) process in FY 1997 (IM OR-97-05, Feb.26, 1997). The FY '97 MOP contains a list of roads to be maintained for the FY, their corresponding maintenance level, and the definitions of each maintenance level.

Inspections of roads during the fall 1996 storms was effectively conducted by road maintenance and area personnel. This practice has been conducted on the District for many years; however, there appears to be a need to document this process for internal and external information.

The 1995 reorganization of the District resulted in the creation of new positions of responsibility as well as a change in Area engineering personnel. Clarification of some of the roles and responsibilities for completing parts of the TMP need to be established.

It is evident, given recent lawsuits filed against other BLM Districts, that some of the public does not realize a transportation plan has been completed or understand the function of the TMP. This concern needs to be addressed.

EXISTING POLICY AND GUIDANCE

The TMP lists in detail the various Executive Orders, Code of Federal Regulations (CFR), and BLM Manuel sections affecting road management (pg.23).

As mentioned above, the NFP and RMP directs BLM in Western Oregon to complete a Transportation Plan and provides general guidance as to the interaction of roads with resource values and the Aquatic Conservation Strategy (ACS) Objectives.

In addition, the Northwest Road Maintenance Report (1995), recognizes the shortfall in funding necessary to maintain the present transportation system. The report recommends, among other items, that in FY1997 each District prioritize roads to be maintained by implementing an annual Maintenance Operating Plan (MOP) and some roads to be removed from the transportation system (through the TMO process).

Comparison of TMP with the BLM 9110 Manual

The BLM 9110-1 Handbook on transportation planning lists five components of a Transportation Plan. While the TMP does not address these on a State-wide scale, the Coos Bay strategy intends to address them as follows:

Inventory – TIMS (Transportation Information Management System) is the current road inventory system for Western Oregon. This system is currently being revised and combined with the Bureau's Facility Information Maintenance & Management System (FIMMS) data base into a UNIX platform (Informix) to be actively linked with the Geographic Information System (ARC).

Access Plan – As major access needs for the District have been accomplished, there is no need for a separate plan. Access into isolated parcels is still needed and is being identified through long-term timber sale planning and/or watershed analysis.

Construction (& Reconstruction) Plan – Major road construction projects for the District have been accomplished and future construction will be limited to timber sales or recreational needs. Reconstruction/improvement efforts will be identified through watershed analysis or timber sales and will be accomplished through site specific analysis. Therefore, a separate plan is not needed.

Maintenance Plan – The annual maintenance schedule is being established at the beginning of each FY. Maintenance standards have been conveyed to road maintenance crews through District IM OR-97-05. Monitoring of the maintenance program is to be accomplished as described in this memo.

Obliteration/Rehabilitation Plan – The District RMP and the recent Biological Opinion on listed and proposed anadromous fish species (NMFS, March 18, 1997) provide overall road density guidelines. Roads recommended for closure and their appropriate treatment are being identified through the watershed analysis (or similar drainage wide analysis) process. Recommendations will subsequently be implemented through the National Environmental Policy Act (NEPA) process. Road closure standards/techniques have been established through the TMP process.

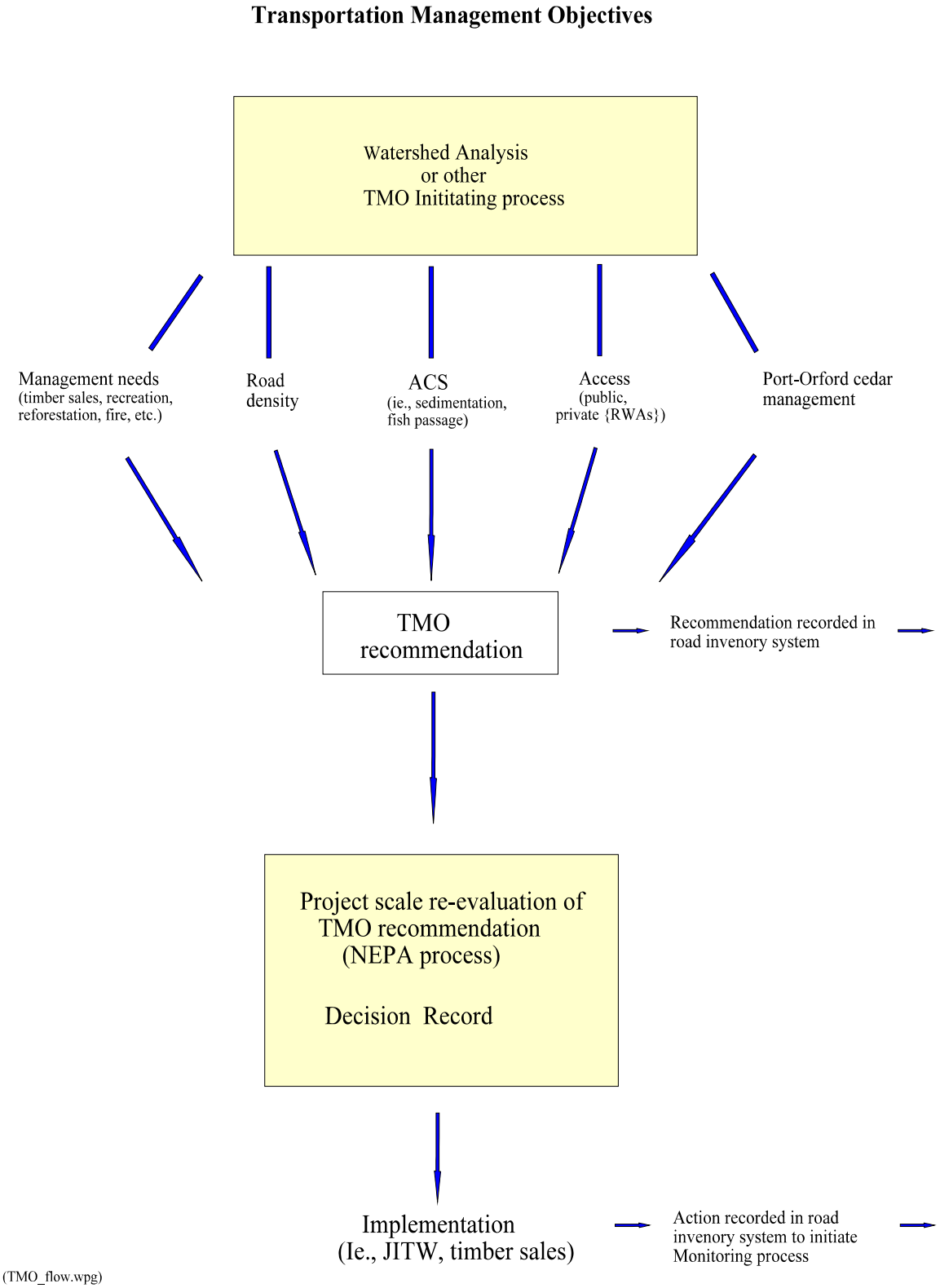
IMPLEMENTATION

Implementation of the TMP will be through the completion of the three primary components: establishing transportation management objectives, developing an annual road maintenance operation plan, and monitoring of road related activities. Each component interacts with the others and is supported by the road inventory system (TIMS). The District strategy on how the TMP components are to be implemented is as follows:

Transportation Management Objectives (TMOs) – TMOs are specific management objectives developed by an interdisciplinary team considering multiple resource needs for both the short- and long-term access needs for each road under BLM management. (Refer to pg. 18 of the TMP)

Development Process – TMOs will be developed or reviewed in conjunction with the watershed analysis process or other opportunities such as project level analyses (timber sales, Jobs-In-the-Woods, ERFO, etc). The interdisciplinary team should identify anticipated levels of road use, applicable road use restrictions, recommended management actions, and the rational (benefitting resource) for the management recommendations. Figure 2 can best illustrate the TMO process.

Figure 2. Flow Chart Describing the TMO Process



Key items which the interdisciplinary team should consider in making a recommendation include:

1. Reduction of sedimentation from roads to meet ACS objectives. Management opportunities include:

    • Close or improve roads actively causing noticeable sedimentation.
    • Close or improve unstable roads that are high risk to aquatic resources.
    • Restrict use of road not able to withstand winter traffic.

2. Access for resource management in the short-term (<5 yrs.) and long-term (15-25 yrs). This may have an effect on the type and duration of a road closure.

3. Access to adjacent private ownership and/or roads under reciprocal R/W have constraints subject to review by the affected parties.

4. Management of Port-Orford Cedar (POC) root rot. Management opportunities include:
    Restrict or close access to uninfected areas.
    Sanitize mainline roads by removing POC adjacent to the roadway.

5. Road density criteria established by the RMP and the Biological Opinion between the BLM, USFS, and/or NMFS concerning coastal anadromous fish species (NMFS, March 1997).

The TMO itself is a recommendation that does not initiate an action, but is carried forth into a decision-making process as part of project implementation.

Product – The output of the TMO process will be a recommended management action for each road and associated rational. The action and supporting data will be filed in the appropriate watershed analysis document/appendix and recorded in the Area's TMO dBASE program.

Responsible Position – The respective Area Road Manager will be responsible for initiating the TMO process, supplying supporting data/maps to interdisciplinary team members, updating the TMO dBASE program, and preparing final as well as FY accomplishment reports.

Implementation Process – TMO recommendations that substantially alter the current status of a road (i.e., road closures, improvements) will undergo NEPA analysis to fully assess the impacts of the action. This process will generally be part of a triggering project such as JITW, timber

sales, or ERFO projects. Final approval will be authorized by the appropriate Manager. Additionally, roads to be closed will be listed in the Federal Register in accordance with 43 CFR §8364 to allow for law enforcement.

Minor changes in road status, such as maintenance level or needed road maintenance, will be coordinated through the respective Road Manager for direct implementation.

Annual Road Maintenance Operation Plan (MOP)

The MOP is a list of roads to be maintained by the District road maintenance unit during a specific fiscal year. It is prepared annually and is intended to balance resource protection and access needs with available funding to perform the work. (Refer to pg. 19 of the TMP)

Process – At the beginning of each FY, once budget information is available, Area Road Managers will develop a tentative list of roads to be maintained that FY. Roads on the list include those requiring annual maintenance (maintenance level 3 - 5)[Maintenance levels are defined on page 13 and in IM OR-97-05.], anticipated timber haul roads, those requiring added maintenance for ACS objectives, or special road projects. The list should be developed from an updated version of TIMS that reflects recent changes in closure status, upgrading, or additional roads.

Area Road Managers are to coordinate with the District Road Maintenance Supervisor for final adjustments to balance road maintenance work load with available funding. Should available funding be insufficient to accomplish required maintenance, the final MOP will be reviewed by the respective Area Managers to determine appropriate maintenance priorities.

Product – A list of roads to be maintained for the upcoming FY and the assigned maintenance levels (TIMS report titled "MOP") will be forwarded to the respective road maintenance shop. A map color coded by maintenance level should be available by FY 2000 following conversion of the current TIMS data base.

Responsible Position – The Area Road Manager will be responsible for preparing the final MOP list. Requests for additional maintenance throughout the FY will be coordinated through the respective Road Manager.

INVENTORY

The Road Manager will be responsible for updating the road inventory system for any data changes (closure status, maintenance level, TMO recommendations, etc.)

and compiling requested reports. Record updates will be coordinated with the respective GIS field stewards, to ensure a direct correlation between the information and spatial data systems.

Port-Orford Cedar Areas – In accordance with the Port Orford Cedar (POC) Management Guidelines adopted in the RMP, to best retard the spread of *Phytophthora lateralis*, BLM will consider possible road decommissioning, roadside sanitization, or seasonal closures in areas containing POC. POC areas usually will be identified and managed in conjunction with project proposals, such as timber sales or Jobs-in-the-Woods. Roads requiring seasonal closures will have limited access by all vehicles during the wet season. A list/map will subsequently be forwarded to the appropriate road maintenance foreman, which may result in certain roads not being maintained during winter months or being repaired to correct storm damage.

Signs – Roads maintained as part of the permanent transportation system should have road signs installed to assist the public and BLM employees. The sign program is to be coordinated through the respective Area Road Manager.

MONITORING

One main objective of monitoring is to patrol the transportation system during/after storms to minimize damage from high rainfall events (Refer to pg. 19 of the TMP). In addition, periodic monitoring of road maintenance, construction, and closure techniques is intended to verify that these practices are meeting ACS objectives.

Storm inspections – The purpose of patrolling the road system during and after heavy storm events is to minimize ongoing damage to the aquatic resources and to the integrity of the road itself. In addition, the extent of damage can be assessed to best prioritize and coordinate repair efforts throughout the District. To accomplish this, the District will institute a varied "color code" response depending upon the intensity of the storm event. This varied response would more efficiently utilize existing resources.

Dispatch will be responsible for reviewing the Quantitative Precipitation forecast provided by the National Weather Service to determine anticipated storms. Depending upon the precipitation forecast, the storm patrol response would be as follows:

YELLOW	alert = 5 - 7 "	rain / 24 hour period.
RED	alert = >7 "	rain / 24 hour period.

The presence of snow packs in the affected area would result in a higher alert than rain precipitation alone.

Patrol & Report Process

***Yellow* Alert**: The arterial and collector road system will be patrolled by road maintenance crews. The local and spur road system will be patrolled as the normal work routine permits. To avoid duplication of patrol efforts, area personnel in the field should report to the appropriate road maintenance crew foreman the geographical area/road system in which they are working. Problems needing immediate attention should be relayed to the appropriate maintenance foreman or, if unavailable, to the District Road Maintenance Supervisor.

***Red* alert**: All available Area personnel shall be dispatched by the appropriate Road Manager to a specific area or road system. Road maintenance crews will conduct emergency maintenance to protect the road system and will not be available for patrol. Area Road Managers will collect maintenance requests and coordinate with the respective Area Manager and District Road Maintenance Supervisor to establish priorities and assess additional work load needs.

Emergency repairs should be prioritized based on the following criteria:

- protection of human life and residential property, whether in the immediate vicinity or downstream.

- protection of key structures (bridges, large culverts) and other important road features (large fills).

- reduction of additional damage to the aquatic resource.

Area personnel shall be responsible for:

- working safely at all times while driving and/or performing maintenance tasks. Safety of District personnel will continue to be of paramount priority and may prompt the need to delay or postpone patrolling during a storm.

- reporting catastrophic problems needing immediate attention to save life, limb, or major key structures (i.e., large culverts, bridges, and major fills) directly to the crew foreman or District Road Maintenance Supervisor.

- performing minimal maintenance tasks that can be accomplished with hand tools (i.e., shovel, axes). Generally, this will consist of simple culvert cleaning or removing small obstacles blocking roads.

- reporting essential information to appropriate person depending upon alert. Information should contain road location, observed problem, equipment needed, and priority (see attached form).

Cost Accounting Process – All personnel will use their regular work charge codes for time and vehicle during initial patrol. However, this work should be flagged so that restitution can be made if emergency funding is allocated.

The ADM, Operations or the District Road Maintenance Supervisor will have the sole responsibility for contracting for non-BLM equipment and/or personnel during emergency responses.

Road Closures – The Road Manager will coordinate the inspection of road closure devices annually (prior to the winter rain season) to determine condition of the barricades. Decommissioned roads will also be inspected to determine whether storm proofing techniques have been effective. Appropriate corrective measures to correct deficient conditions would be identified and implemented through subsequent contracts or, if the need arises, by road maintenance crews (charge code 6300).

Periodic Inspection of Road Maintenance Operations – As part of RMP implementation, road maintenance practices would be added to existing monitoring procedures, such as timber sales or reforestation practices. Practices that are not meeting ACS objectives would be identified and changes in practices or maintenance level would be made.

DATE_____ ROAD #_____ ROAD NAME_____

MILE POST_____ REPORTED BY_____

OBSERVED PROBLEM:

ESTIMATED TYPE OF EQUIPMENT NEEDED:

PRIORITY------EMERGENCY_____ HIGH_____
MODERATE_____ LOW_____

COMMENTS:

RADIO/CELL PHONE NUMBERS FOR ROAD MAINTENANCE SUPERVISORS

Name	Area	Radio No.	Cell Phone No.

H:\SVY\WP\TMP NO RED.WPD